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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/590,503      | 08/24/2006  | Norikazu Sugaya      | 2006_1372A          | 1096             |

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Washington, DC 20005-1503

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| EXAMINER |
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FLETCHER III, WILLIAM P

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1717

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

06/15/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ddalecki@wenderoth.com  
coa@wenderoth.com

|                              |   |                                      |  |
|------------------------------|---|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/590,503            | <b>Applicant(s)</b><br>SUGAYA ET AL. |  |
|                              | <b>Examiner</b><br>WILLIAM PHILLIP FLETCHER III | <b>Art Unit</b><br>1717              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

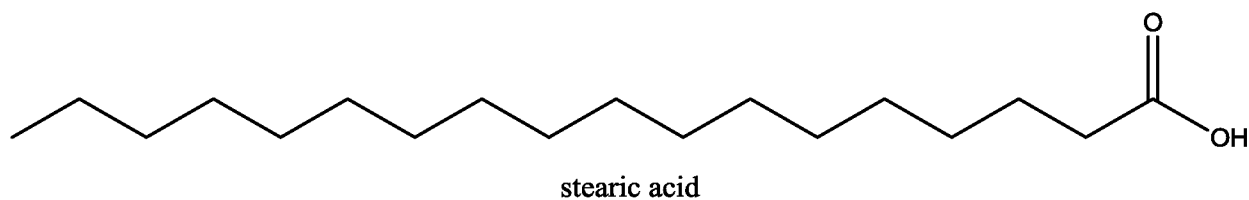
## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 April 2011 has been entered.

### ***Response to Arguments***

2. Applicant has amended the claims to recite *a straight-chain fatty acid having a water-repellent property*. This does not distinguish over the cited prior art. In the instant specification, Applicant discloses stearic acid, a C<sub>18</sub> acid [¶0075; 32:9 & 13] as an exemplary acid:



In further disclosing the water-repellent nature of the acid, Applicant discloses: "Since an organic acid is bonded to a nickel coat, with alkane (C<sub>n</sub>H<sub>2n+2</sub>) having a water-repellent property also directed outward and a hydrophilic group also directed inward, intimate bonding thereof with the nickel coat can be acquired" [¶0076]. It is the Primary Examiner's position that, while the mere disclosure of stearic acid as an exemplary embodiment is sufficient to establish it as having a water-repellent nature, it certainly

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meets the further disclosure of having a hydrophobic alkane chain and a hydrophilic group:  $C_9H_{20}-COOH$ . Consequently, absent evidence to the contrary, stearic acid meets the newly-claimed limitation of *a straight-chain fatty acid having a water-repellent property*. As established in the record, it would have been obvious to one skilled in the art to utilize an acid disclosed by WO '549 — of which stearic acid is one [10:1] — in the process of JP '267. Consequently, this new limitation is taught by the cited combination of references.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 12-16 and 20 are rejected under 35 U.S.C. 103(a) as obvious over JP 2002-180267 A in view of Applicant's admitted prior art and WO 96/39549 A1.

A. Claims 12, 13, and 20

i. This reference teaches a process for the treatment of a Ni-plated, Cu alloy waterworks appliance, which anticipates the recited *water-contact instrument* as exemplified at [0002] of the instant Specification (see above). The applicant is immersed in a solution of benzotriazole (BTA) and organic acid, thereby forming a protective film [0007, 0008, and 0025].

ii. While this reference does not expressly teach that Ni elution is suppressed, since the reference teaches all of the *claimed* process steps and materials, it is the Examiner's position that the film formed suppresses elution of Ni, absent evidence to the contrary.

iii. This reference does not expressly state that the Ni film *wraps around and adheres to at least a wetted surface of the wetted instrument*. Applicant's admitted prior art teaches that providing such a Ni film is known in the art [0007]. Consequently, it would have been obvious to one skilled in the art to provide the Ni film in such a known fashion motivated by the desire and expectation of successfully providing a coating that is aesthetically pleasing and resistant to corrosion and abrasion.

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iv. This reference does not expressly state that the organic acid is a straight-chain fatty acid. As noted in the prior Office action, the reference is not limited to any one type of acid and it is readily apparent that any acid resulting in the desired acidity [0023-0025] may advantageously be used. WO '549 teaches a composition for protecting the surfaces of water system components that contains both a straight-chain fatty acid and benzotriazole [7:25 - 10:26]. The composition advantageously prevents corrosion of the water system component. Consequently, it would have been obvious to one skilled in the art to utilize, as the organic acid, a straight-chain fatty acid, motivated by the desire and expectation of providing an acid with which to adjust the acidity of the composition and further advantageously impart corrosion resistance to the water system component.

v. As noted above, WO '549's teaching of stearic acid meets the newly-claimed limitation requiring *a straight-chain fatty acid having a water-repellent property*.

B. Claim 14

i. This reference does not expressly teach the formation of more than one layer. Nevertheless, it is the Examiner's position that multiple applications of a coating material in order to build up a film of a desired thickness is well known in the art and would have been readily obvious to one skilled in the art. Since the claim does not require that the first and

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second application of the protected film be compositionally different, the above-described application of multiple layers satisfies this limitation.

ii. Further, as noted above, since the reference teaches all of the *claimed* process steps and materials, it is the Examiner's position that the film formed suppresses the elution of Ni due to bimetallic corrosion, absent evidence to the contrary.

C. Claim 15

i. JP '267 does not expressly recite that the Ni coat has pinholes and that the protective film insulates the underlying Cu alloy and Ni.

ii. Applicant's admitted prior art further teaches that Ni plated coatings have pinholes.

iii. Since conventionally formed Ni coatings have pinholes, there is a reasonable expectation that the Ni coating of JP '267 has such pinholes. Further, since the reference teaches all of the *claimed* process steps and materials, it is the Examiner's position that the film formed insulates the underlying Cu alloy and Ni, absent evidence to the contrary.

D. Claim 16

i. As noted above, since the reference teaches all of the *claimed* process steps and materials, it is the Examiner's position that the film formed suppresses dissolution of the Ni by wetting, absent evidence to the contrary.

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6. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-180267 A1 in view of Applicant's admitted prior art and WO 96/39549 A1, as applied to claim 12 above, further in view of EP 0 892 084 A1.

A. While JP '267 teaches that the Cu alloy also contains Pb, this reference does not expressly teach the limitations of the claims.

B. EP '084 teaches contacting a Pb-containing Cu alloy waterworks device with an acidic detergent to prevent the elution of Pb from the device [abstract; 2:1-4 & 37-40 and 9:14-16]. EP '084 teaches the acidic detergent contains HNO<sub>3</sub> and HCl [2:37-47; 5:24-42; and 6:Table 2]. At paragraphs [0007+] of the instant Specification, Applicant's disclose that the mere presence of a Ni coat may result in the elution of Ni in water. Consequently, it is the Examiner's position that a Ni salt residue is inherently formed as a result of the Ni plating process and said Ni salt will be removed by the acidic detergent, which is an aqueous solution.

C. It would have been obvious to one skilled in the art to modify the process of JP '267 so as to contact the waterworks appliance with the acidic solution of EP '084 motivated by the desire and expectation of additionally suppressing Pb elution.



***Conclusion***

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM PHILLIP FLETCHER III whose telephone number is (571)272-1419. The examiner can normally be reached on Monday through Friday, 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/  
Primary Examiner, Art Unit 1792

10 June 2011